

the following specification, appended claims, and accompanying drawings.

IN THE DRAWINGS

5 Figure 1 is a perspective view of a stabilized retaining wall structure with a portion of the retaining wall being shown along a vertical sectional view;

10 Figure 2 is an end elevational view of a retaining wall block of the type illustrated in Figure 1, and illustrating in phantom the disposition of the coupling means as attached to a stable anchoring assembly;

15 Figure 3 is a top plan view of a block structure of the type illustrated in Figure 1, and further showing one embodiment of the coupling means of the present invention in position within the core of the block;

20 Figure 4 is a detail perspective view of one preferred embodiment of the coupling means of the present invention;

25 Figure 5 is a view similar to Figure 3, and illustrating an alternate form of coupling means secured within the block structure;

30 Figure 6 is a detail elevational view of a further alternative embodiment of the coupling means and illustrating an elongated fastener being slidably engaged within a stopper element, with a portion of the elongated fastener being cut away; and

35 Figure 7 is a horizontal sectional view illustrating the arrangement detail of the locking sleeve utilized to retain the elongated fastener within the block structure.

DESCRIPTION OF A FIRST PREFERRED EMBODIMENT

40 In accordance with one preferred embodiment of the present invention, and with particular attention being directed to Figure 1 of the drawings, the stabilized retaining structure generally designated 10 comprises a plurality of

individual blocks 11-11 which are arranged in a plurality of superimposed rows to form a stacked array. Each of the blocks 11 has a rear surface 12 with a hollow core 14 being formed in at least selected of blocks 11. Retaining wall blocks of this configuration and/or form are known in the art.

Blocks 11 are provided with an access bore 15 which extends through the block from the rear surface to the surfaces of the wall comprising the hollow core. As further indicated in Figure 1, a rock and earthen fill such as is illustrated generally at 17 is in contact with the rear surfaces 12 of the blocks 11, with fill 17 comprising a pair of individual or separate layers. The first layer 18 positioned adjacent wall 10 is preferably clean granular backfill, such as clean crushed rock or binder rock. The more remote layer 19 consists of on-site soils such as, for example, black earth, typically containing quantities of clay and salt. A stable anchoring assembly shown generally at 21 is disposed within the on-site soil, with assembly 21 being comprised of individual geogrid members shown at 22-22.

Alternative forms of anchoring assemblies may be employed in lieu of geogrids 22, such as for example, steel, mesh, deadman, or the like.

Inasmuch as the on-site soils typically contain moisture and salts, galvanic or electrolytic corrosion typically occurs within metallic components buried or otherwise immersed in the soil. The galvanic corrosive action is accelerated and/or supported if the on-site soils are permitted to make contact with the rear surfaces of the individual blocks, with the area adjacent the blocks being characterized as the "corrosive front". Thus, deterioration of any metallic components disposed in close proximity to the interface between the block wall and on-site soils may suffer rapid deterioration. In

order to reduce the level of activity of the corrosive front, and increase the life of metallic components disposed therearound, the utilization of clean granular fill has been found to be helpful but never sufficient to eliminate the problem. However, because of the nature of certain soils, taken together with the salts present in the individual blocks, coupling means may be provided to link individual blocks to the stable anchoring assembly which are non-metallic and thus generally immune from corrosive action. In these situations, there remains a need for clean granular backfill, particularly for reduction and/or elimination of hydrostatic forces which may otherwise develop if saturated on-site soils are permitted to remain in contact with the retaining wall structure. In accordance with the present invention, however, the retaining wall is provided with additional stabilizing features through the utilization of coupling means which conveniently link the blocks to a remotely disposed stable anchoring assembly.

With attention now being directed to Figures 3 and 4 of the drawings, the coupling means generally designated 25 comprises a keeper device 26 to which there are attached a pair of elongated fasteners as shown generally at 27-27 (see Figure 3). In the alternative arrangement of Figure 4, keeper device 26A is provided with a single fastener 27.

Each fastener 27 has a proximal end 30 and a distal end 31 comprises a central body segment 29 interposed between the proximal and distal ends. Body segment 29 extends through and distally of block 11, passing through access bore 15 formed in the rear web of block 11. Distal end 31 is configured to engage or otherwise be secured to a suitable anchoring point in one of the geogrids 22-22. Thus, distal end 31 comprises an anchoring assembly attachment means.